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STUDENT REPORT

UNDERSTANDING KC-130 EMPLOYMENT IN SUPPORT OF THE SPECIAL-OPERATIONS-CAPABLE MARINE EXPEDITIONARY UNIT

MAJOR DANIEL RAY HUDSON 88-1295

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KC-130 aircraft can be successfully and effectively employed in the support of the Marine Expeditionary Unit, Special Operations Capable. The article will outline the mission of the Marine Expeditionary Unit, Special Operations Capable and examine the capability of the KC-130 to perform this mission. Special attention will be given to those tasks that the aircraft is particularly suited to perform as well as personnel, equipment, and training shortfalls that limit the KC-130's ability to perform special operation missions.

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PREFACE

This article addresses the missions and capabilities of the Marine Expeditionary Unit Special Operations Capable (MEU (SOC)) as related to the mission capabilities of the Marine Corps KC-130. The MEU (SOC) is capable of performing a variety of maritime missions that require specific air support. The KC-130 is a valuable asset to the Marine commander. The KC-130 Hercules and its crew can perform a variety of missions but there are limitations which must be understood if this asset is to be used in special operations missions.

Problem areas within the Marine Air Refueler Transport (VMGR) community will be discussed. These areas include equipment, aircrew training, administration, and their their relationship to the KC-130's ability to perform MEU (SOC) missions. Special emphasis must be placed on efforts to solve these problems. Subject to clearance, this manuscript will be submitted to Marine Corps Gazette for consideration.

The author wishes to thank the following: Major Joe Rogish, who sponsored this project; Lt Col William Hammerle, who served as advisor and provided guidance and direction; and Mrs Bowick for her typing support. The author also thanks the numerous individuals from the Marine Corps VMGR community for their support and encouragement throughout this effort.

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EXECUTIVE SUMMARY

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REPORT NUMBER 88-1295

AUTHOR(S) MAJOR DANIEL R. HUDSON, USMC

TITLE UNDERSTANDING KC-130 EMPLOYMENT IN SUPPORT OF THE SPECIAL-OPERATIONS-CAPABLE MARINE EXPEDITIONARY UNIT

I. Purpose: To address the capability of the Marine KC-130 aircraft to perform the mission requirements of the Marine Expeditionary Unit, Special Operations Capable.

II. Problem: Ground component commanders do not comprehend the capabilities of the KC-130. Likewise, they fail to realize the Marine KC-130 and its aircrew are neither trained nor equipped to perform the full spectrum of special operation missions. Commanders must know what missions the KC-130 can successfully accomplish and not have unrealistic expectations of this aircraft's capabilities.

III. Objective: The KC-130 is one of the most versatile aircraft within the Marine Corps inventory. It is a valuable asset to any commander, but its specific attributes and limitations must be thoroughly understood by those who intend to use it. By comparing the missions and capabilities of the Marine Expeditionary Unit, Special Operations Capable to those of the Marine KC-130 and crew, it can be clearly established that this aircraft can perform some, but not all, special operations requirements. The special operations capabilities of the KC-130

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are limited due to its primary air refueling mission. Certain equipment and flight characteristics are of great importance and lend well to some but by all means not every special operations scenario. Commanders of KC-130 squadrons must know what is expected of their aircraft and aircrews in the special operations area. This dictates two-way communication between the ground commander and the aircraft operators in order to establish equipment procurement priorities, aircrew training, and viable related support.

IV. Conclusions: The KC-132 aircrews must be prepared to perform special operations. These special operations can be conducted in a no-threat environment. The KC-130 lacks the equipment to conduct operations into non-lighted airfields or fly night low-level missions. Rapid ground refueling, air refueling, and long-range assault support missions are those which the KC-130 is particularly suited to support special operations.

V. Recommendations: The Marine Expeditionary Unit, Special Operations Capable commander must employ the KC-130 effectively. If he fails to use this aircraft in the correct manner a valuable asset, the KC-130, could be lost either through lack of commitment or through combat attrition. The Marine Corps needs to procure the equipment required for the KC-130s in this expanded role of special operations. However, fiscal realities must be closely considered. Probably the greatest gain in capabilities can be made through an aggressive aircrew training plan. This plan needs to encompass the following areas: (1) expanding current training; (2) embarking into new areas of training; and (3) dedicating a higher percentage of the total flight time to aircrew training. Gains can be made in the combat effectiveness of the KC-130 if a holistic approach to this program is properly initiated and maintained.

Chapter One

BACKGROUND

In August of 1954 a new aircraft was rolled out of Hangar C-1 of the Lockheed Aircraft, Burbank, California facility (1:77). This aircraft was destined to be one of the finest transport and utility aircraft ever produced. It has been built in various configurations, sold to many countries, and flown by the United States Air Force, Coast Guard, Marine Corps and Navy. This aircraft will carry the U.S. military into the 21st century and is still produced by the Lockheed Company at Marietta, Georgia. Those familiar with this description will recognize the aircraft as the C-130 Hercules.

1961 saw the United States Marine Corps take delivery of its first KC-130F, an air refueling model of the standard C-130. This version was designed, manufactured, and produced to satisfy all of the air refueling requirements of the Marine Corps. The Hercules was also capable of performing the transport duties of the standard C-130. Shortly after its induction into the fleet of Marine aircraft, the Hercules proved itself in combat. Throughout the Vietnam conflict, the KC-130 was a valuable asset to the Marine Corps, providing air refueling to Marine and Navy aircraft while furnishing combat assault support to isolated battle sites such as Khe Sanh (1:381). The Marine Corps received its first KC-130R, an updated version of the original Marine Hercules in 1975. This new aircraft did not replace the older KC-130s but augmented existing squadron aircraft. The improved Hercules had updated navigation and communications equipment to include an inertial navigation system, Omega and new UHF, VHF and HF radios, and was also capable of carrying 18,000 additional pounds of fuel (3:121). During the 1980s the US Marine Corps began procurement of the latest version of the "Marine Tanker," the KC-130T, a state-of-the-art aircraft with upgraded radar, radios, and instrumentation.

Since its introduction into service the KC-130 has been a valuable asset to the Marine combat commander. The Hercules was used primarily as a tool to satisfy the air refueling needs of the Air Combat Element Commander (ACE), and has been increasingly used by the Air Ground Task Force commander to support the concept of special operations. Other countries besides the United States have demonstrated the effective use of the C-130 to support special operations. Examples of special operations use of the C-130 include the Entebbe raid of 1976 performed by Israel

to free hostages, and the United States' use of the C-130 in the ill-fated Desert One Operation. The Desert One Operation, although unsuccessful, demonstrated that C-130s could be used to ground refuel helicopters during special operations. In order to increase combat effectiveness, the commander must emphasize the best utilization of all his assets to include the KC-130 aircraft. This effective utilization of assets applies to normal and special operations.

With the increased interest in special operations, the aviational and ground operational commanders must know when, where, and how to most effectively use the KC-130 aircraft. This is accomplished by first understanding the capabilities of the aircraft and aircrews. Translating these factors into how this system relates to mission requirements of the MEU (SOC) is the next step. This essay will be an examination of the MEU (SOC) and the KC-130 missions and capabilities and provide for a thorough understanding of the role the Hercules can and will play in special operations. In addition, current and potential problem areas as well as future integration of the KC-130 system into special operations planning and execution, will be explored.

Chapter Two

THE MARINE AMPHIBIOUS UNIT, SPECIAL OPERATIONS CAPABLE MEU (SOC), HISTORY AND MISSION

Conceptually, the United States Marine Corps operates as a Marine Air Ground Task Force (MAGTF) consisting of ground, air and service support elements. The MAGTF's size and structure are dependent upon its task. The Marine Expeditioary Unit (MEU), the smallest organization of the MAGTF, consists of a battalion-size combat force with aviation and combat support elements of parallel strength. A MEU is capable of performing the following missions (2:2-25):

1. Commitment as an advance force for a larger follow-on MAGTF.

2. Conduct of amphibious assault operations of limited duration.

3. Conduct of amphibious raids.

4. Conduct of humanitarian assistance/disaster relief.

5. Protection and evacuation of noncombatants.

6. Reinforce combat elements by surface or airlift.

7. Provide air support, fire support, combat service support, or other military assistance to allies.

These missions have been the cornerstones for Marine actions for many years and will continue as a basis for amphibious doctrine.

The early 1980s saw the Marine Corps' leader become increasingly concerned with unconventional threats to the security and interests of the United States (2:2-1). A reevaluation of the threat indicated that a definite increase in state-sponsored terrorism existed. Terrorists were found to be highly trained and equipped, capable of performing activities ranging from bombings to the taking of large groups of hostages (2:2-1). The Deputy Secretary of Defense, realizing that the United States must be able to respond to terrorist activities, began to revitalize the nation's special operations capability in 1983. The following year the Commandant of the Marine Corps, General P. X. Kelley, directed that the Commanding General of Fleet Marine Force

Atlantic (CG FMFLANT) evaluate the special operations capability within the Marine Corps (3:2-1). CG FMFLANT found that the Marine Corps possesses certain special operations capabilities (3:2-1). The Marine Corps found that its combination of air, artillery, armor, infantry and combat service support elements under one commander lends itself well to special operations. This unity of command that includes a combination of supporting arms, provides a unique capability to perform operations on very short notice. This quick reaction capability relieves some of the problems associated with coordination, control, and positioning of combat troops.

Based on these findings, the Marine Corps Expeditionary Unit, Special Operation Capable (MEU [SOC]) concept was conceived in 1985 and a pilot program introduced (3:2-2). Additionally, the MEU (SOC) was able to perform the amphibious raid within six hours at night over the horizon, using various means of transport to include helicopters, rubber rafts, raiding craft, and others. A MEU (SOC) composition also enables recovery operations to be executed in a timely manner (2:20). These recovery operations are performed clandestinely or conventionally and include a range of actions from recovery of prisoners of war to the evacuation of noncombatants. The MEU (SOC) can specifically execute the tactical recovery of aircraft and crews in a hostile area and execute the in-extremis hostage rescue when other forces are not available (2:20). Other special mission capabilities include: (1) mobile training teams that will provide instruction to include evacuation operations, small unit anti-terrorist, weapons skills and other areas of training to non-US military units; (2) civil affairs operations; (3) short notice security/reinforcement operations throughout the world; (4) the global maritime ability to rapidly show force; (5) military operations in urban terrain; (6) tactical military deception operations; and (7) other special operations support capabilities (3:42). It must be emphasized that the MEU (SOC) operates in a maritime environment with the seagoing assets of the United States Navy and Marine Corps. The MEU (SOC) was not conceptualized to perform certain specialized operations. The Marine Corps does not plan on performing surgical counter-terrorist hostage rescues, establishment of escape and evacuation networks, psychological operations, sabotage, or subversion (3:4-4). Likewise, the MEU (SOC) is not in competition with the Joint Special Operations Command.

This overview of the MEU (SOC) illustrates how the Marine Corps responds to a changing threat environment that requires special training and special equipment to successfully accomplish its mission. The following chapters will examine the Hercules aircraft system including aircraft, equipment, and aircrew in order to establish viable expectations with regard to MEU (SOC) missions and KC-130 capabilities.

Chapter Three

MARINE AERIAL REFUELER TRANSPORT SQUADRONS AND THE KC-130 MISSION

C-130s in the United States Marine Corps are organized into three active duty, one training, and two reserve aerial refueler transport squadrons (VMGR). Each active operational VMGR squadron operates 12 KC-130 aircraft.

Marine Corps Manual 5-1 states that the mission of the VMGR squadron is to provide aerial refueling service in support of Fleet Marine Forces (FMF), assault air transport for personnel, equipment, and supplies, and to conduct other air operations as directed (5:40). To support these missions VMGR squadrons perform the following tasks:

(1) Air refueling

(2) Assault air transport

(3) Air delivery

(4) Long-range support

(5) Casualty evacuation

(6) Command and control

(7) Ground refueling

(8) Illumination (5:41)

Primarily, the Hercules functions as the commander's in-flight refueler. Refueling operations are commonly conducted in a day/night low-level and emission-controlled (no communication) environment. VMGR squadrons were originally established to function as air refuelers and this fact must never be neglected.

Hercules squadrons are highly qualified to provide air transport of air-landed troops and combat cargo between a logistic air head and small combat airfields. Fields as short as 3,000 feet can be utilized. This support capability within an objective area exists for both day and night operations; however, minimal lighting is required. Portable, battery-powered runway lights can provide this lighting. To enhance short field operations,

the C-130 is capable of using assisted takeoff (ATO) rockets. These rockets add to the aircraft's takeoff or climb capability; however, transportation and installation of ATO bottles present logistic problems (6:2-35).

Air delivery of troops, equipment and supplies is an important facet of the C-130's potential. All KC-130s are capable of day/night and all-weather air drops. This gives versatility to the transport role of the Hercules.

The long-range ability of the Hercules serves the Marine Corps' needs in many areas. VMGR squadrons will continue to support Marines through long-range missions which could include casualty evacuation from foreign combat zones or routine resupply missions.

Several KC-130 aircraft are designated as command and control aircraft. These aircraft are specially equipped with electrical power sources and antennas designed to accommodate command and control packages.

Rapid ground refueling has always been a capability of the Marine Hercules. KC-130s are well equipped to perform the mission of rapid ground refueling due to its large fuel capacity, plumbing and special high pressure/volume fuel pumps. These pumps are capable of providing a maximum of 300 gallons per minute at 40-50 pounds per square inch (6:3-3). Fuel is transferred from the KC-130 to other aircraft through rubber fuel hoses. These hoses can be configured with numerous refueling points; however, the more points, the less the fuel pressure per point. Electrical power for the aircraft fuel pumps is provided by the Hercules' engines or an external ground power source. Recently, emphasis has been placed on utilizing the ground refueling ability. It is particularly important that every Marine aircraft type is compatible to ground refueling from the KC-130. The Hercules is able to ground refuel all but a few aircraft, with both the KC-130 and the aircraft being refueled with engines running. This "hot refueling" capability expedites operations.

Flare delivery by the KC-130 provides illumination for a variety of missions. Illumination for close air support missions, helo assault, and search and rescue missions can be provided (6:3-8). Flare missions provide pinpoint illumination to areas inaccessible to artillery or motor units. The MI-45 and the LUU-2 A/B are the primary flares used by the Hercules. A MK 45 will provide 2 million candlepower of illumination for 210 seconds and the LUU-2 A/B provides 1.6 million candlepower of illumination for 300 seconds (6:3-8,11).

It can be seen that the KC-130 is a highly versatile aircraft with proven capabilities and potential. Obviously, these capabilities are limited by the ever-increasing enemy threat. This threat includes highly sophisticated surface to air weapons and

small, hand-held anti-aircraft missiles. High threat missions present real problems for the unarmed KC-130 and cannot always be accomplished without a degree of risk to the aircraft and crew. The abilities of the KC-130 tremendously outweigh its shortcomings. If used advantageously while taking into account its lack of defenses, a Hercules is a valuable tool to the Marine combat commander.

Chapter Four

THE KC-130's ROLE IN MEU (SOC) OPERATIONS

Before effective use of the Hercules can be enjoyed, a close examination of its potential must be accomplished. Comparison of the missions and tasks of the MEU (SOC) and those of the VMGR squadrons clearly show an exciting compatibility. As previously stated, The KC-130 is primarily designed to support refueling operations. This capability includes airborne refueling of fixed wing fighter and attack aircraft, airborne refueling of the CH-53E helicopter, and ground refueling of all aircraft operated by the U.S. Marine Corps. Logistically, the KC-130 has the potential to enhance the MEU (SOC) commander's capability by serving as a force multiplier. As a force multiplier the Hercules gives the tactical fixed wing and rotary aircraft extended on station time, range, and stand-off distance. Utilizing the Hercules in rapid ground refueling (RGR) gives the MEU (SOC) commander the benefit of using short, unimproved airfields to refuel aircraft that do not possess air refueling capabilities. Ground refueling will give greater range to those aircraft, thereby increasing the MEU (SOC) commander's operational flexibility.

The KC-130's capability of long-range transport of equipment or personnel, combat troops, civilian and medical evacuees for the MEU (SOC) commander must be utilized. Conducting missions day or night in adverse weather conditions to conventional and unimproved airfields or through the use of air drops offers the commander excellent flexibility. Specifically, the MEU (SOC) commander can use the KC-130 to insert reconnaissance teams, move equipment or move other personnel non-transportable by helicopter. This relates directly to the MEU (SOC's) ability to conduct amphibious raids or evacuate personnel. Because of its size, speed, and range, the KC-130 is of great value in evacuations of personnel, military or noncombatants.

The Hercules possesses a unique combination of avionics equipment (radios and navigation instruments), lending itself well as a command and control platform. A limited number of aircraft also possess special antennas and power supplies designed for command and control packages. These packages consist of a van equipped with a plotting board and various UHF, VHF, FM and HF radios. Long-range precision navigational capability, extended range and long loiter time lends well to the Hercules functioning as a lead aircraft on extended missions. The command and control potential in combination with the air and

ground refueling capabilities should be clearly understood by the MEU (SOC) commander during the planning phase of all operations.

Flares are used by the KC-130 to provide illumination. In the direct illumination role, the Hercules provides illumination for night assaults, opposed or unopposed, air or ground, night close air support, search and rescue operations, or for defensive operations. Examples of direct illumination include flare drops directly over helicopter landing zones, targets, or areas of ground operations. In the indirect role flares are not dropped over the operating area but at a distance, and give indirect light for night vision goggle work or provide for a deceptive technique. Flare drops at a point other than that of the operation may confuse the enemy as to a commander's true intentions. When a surface to air threat exists, flare mission should never be attempted.

The capabilities of the KC-130 provide the MEU (SOC) commander a great deal of flexibility and latitude. Consideration must be given to the limitations of the KC-130 system. These limitations will dictate how, when, and where the commander should employ his aircraft.

Chapter Five

KC-130 SYSTEMS LIMITATIONS/RECOMMENDATIONS

The knowledge of strengths and weaknesses of one's self, his assets, and those of his opponent, are some of the keys to success. This chapter will examine the limitations and weaknesses of the KC-130 system. A major consideration of a commander is the proficiency of his aircrews to perform specific missions. An example of a specific limitation caused by the aircrew would be a crew incapable of performing a low-level mission due to the lack of proficiency. Although the KC-130 is designed to fly low, this does not necessarily mean the pilots and crew are competent at low altitude flying. Attempts to fly at low altitudes when the aircrew is not properly trained can obviously lead to an unaccomplished mission or even loss of the aircraft. This example of low-level flight proficiency applies to numerous facets of flight skills that must be performed to accomplish a mission.

To provide for aircrew proficiency and ensure completion of assigned MEU (SOC) missions, emphasis must be placed on realistic aircrew training programs. These programs must be established based upon MEU (SOC) requirements. Currently, an inadequate training program administratively exists as published in the Marine Corps Aviation Training and Readiness Manual, Volume 2. To support the full spectrum of MEU (SOC) operations, refinements and modifications are necessary to ensure that Hercules pilots are highly qualified in all aspects of KC-130 tactics. Modifications of these training programs depend directly upon the mission needs of the MEU (SOC). Training program expansion must include areas such as night vision goggle flying, low altitude parachute extraction system (LAPES) training and defensive tactics (DEFTAC). Night multi-tanker air refueling also requires the initiation of a comprehensive training program. A building block approach to training is essential. An example of this type of training is the requirement that KC-130 pilots fly several night formation flights prior to conducting multi-tanker night refueling missions. Some phases of training would have to be augmented with equipment acquisition. Equipment procurement will be addressed later.

Aircrew capabilities suffer from the programs as outlined in Navy and Marine Corps publications, but they are more often plagued by the lack of flight time allocated for training. Hercules operators feel that heavy operational commitments have negatively impacted their squadron (15:1). Statistics indicate

that only one-third of the total squadron flight time supports squadron training (16; 17). This lack of dedicated training time exemplifies the negative nature commitment flights have on squadron training. A more equitable division of flight time would dedicate 45 percent of the squadron's total flight time to squadron training (15:1). If new programs are added, more flight time must be dedicated to aircrew training.

At the present time, a limited number of KC-130 pilots are 100 percent capable or fully qualified in all missions of the aircraft as outlined in the Training and Readiness Manual, the KC-130 NATOPS manual and FMFM 5-1. Combat readiness percentage (CRP) is used as a tool to track flight crew combat readiness. CRP is computed by allocating a given number of percentage points for each qualifying skill a flight member possesses. CRP also takes into account the time interval between missions that require certain skills. Historically, VMGR squadron pilots maintain 80 percent combat readiness percentage (CRP) plus or minus 5 percent (13; 14). Aircraft commanders maintain a slightly higher CRP than co-pilots but mission capability is measured by the lowest CRP within the crew.

Aircrew training levels directly relate to the MEU (SOC) commander's capability to employ the aircraft. Due to the lack of available training time, a very small percentage of aircrews can be expected to perform specialized missions (14:1).

The Marine Hercules is getting a new tactical paint scheme, but tactical equipment procurement is questionable due to fiscal restraints. Commanders must think of how the KC-130 as a combat aircraft can be used on the modern battlefield, and stop thinking of the Hercules as an airliner. The lack of defensive equipment such as chaff or flares dictates that the Hercules only be operated in a very low-threat environment. Operations in a high threat environment could be disastrous. The lack of secure communications equipment is another ongoing problem that must be resolved by the VMGR community (10:4). The lack of secure communications equipment eliminates secure communications between the KC-130 and other special operations aircraft. Also, other equipment may be needed if more specialized missions are expected of the Hercules. Equipment such as night vision goggles must be procured to perform the full spectrum of night operations. It cannot be overemphasized that understanding aircrew training levels and the KC-130 equipment capabilities is a key to knowing the limits of the Hercules in a special operations roles.

Currently, the KC-130 is capable of performing all the previously assigned missions in a low altitude, daytime, VFR, low threat environment (6:2). Hercules crews can fly night, low altitude missions and land on unimproved limited lighted airfields, but they face certain restrictions. The KC-130 as presently equipped and aircrews as presently trained have limited night, low level mission capabilities and cannot operate from

non-lighted airfields. To expect a full range of these capabilities to exist is an unrealistic assumption that could lead to mission failures and unacceptable attrition rates. The future could look good for the KC-130 community, within five years. Equipment scheduled for procurement includes defensive electronic countermeasures equipment, night vision goggles and compatible aircraft lighting, a global positioning system, SATCOM antenna, and improved radios (12:1). Various systems packages and improved cargo handling equipment are proposed for procurement during the 1990s (12:1). However, budgetary restraints could cause deletion of some equipment procurement. In addition to the already scheduled procurements, future mission requirements may dictate the need for specialized equipment to include an inflight refueling capability for the KC-130, and night all-weather low altitude flight instrumentation. The fact is that a specialized special operations capable C-130 exists today.

A prototype special operations C-130 can be found in the United States Air Force aircraft inventory. The US Air Force MC-130 is a special operative configured C-130 which includes: terrain following radar, ground mapping radar, electronic countermeasures, high-speed, low-level aerial delivery system, ground-acquisition receiver/interrogator, inflight refueling, secure HF, VHF, VHF-FM and SATCOM radios and forward looking, infrared capabilities (9:5-6). According to Air Force doctrine, this equipment is necessary for specialized missions (9:5-6). These special missions include blacked out landings, low-level, all-weather flights, and penetrations deep behind enemy lines in a high-threat area.

Careful thought must always be given prior to procuring of new systems or equipment. It must be remembered that added technical equipment requires additional personnel to perform increased maintenance. When maintenance needs increase, so does the need for trained personnel and spare parts. The cost of training these added personnel and the procurement of specialized spare parts could be prohibitive. The increase in equipment can also lead to increased equipment failure and possible mission abort. Although obvious, these facts must be remembered when procurement programs are initiated.

An area that must be specifically addressed is that of the Air-to-Air and Ground-to-Air equipment needed to counter this threat. Although defensive equipment, to include radar detectors, chaff and flares, is scheduled for procurement in the early 1990s, in the past procurement schedules have been extended due to low priority and budgetary restraints. Budgetary priorities must include procurement of defensive equipment.

An airborne delivery system to be used in a high-threat environment should be procured. Two systems are currently available that could satisfy the airdrop requirement. The airdrop systems which lend themselves to the high-threat environments are

the low-altitude parachute extraction system (LAPES) and the low-altitude, high-speed airdrop system as now installed on the MC-130. The LAPES system is the most practical method that the Marine Corps can adopt due to the system's low cost and short installation time (15:1). The high-speed airdrop system requires major airframe modifications. Although equipment requirements represent difficulties to the special operations concept, personnel and training present other unique problems.

An approach to the training problem is the establishment of a cadre of specially trained crews who would train with the MEU (SOC) and deploy with the MEU (SOC). This approach raises many issues to include those of personnel administration, pay and leave, TAD funding, and actual locations of the attached KC-130s. The fact that the Hercules cannot operate from ships as does the MEU (SOC) presents problems of VMGR squadron responsibilities associated with geographical locations of the MEU (SOC). If a MEU (SOC) originates from the continental US and sails to the western Pacific, who is responsible for the support of the MEU (SOC) VMGR-352 on the West Coast or VMGR-152 in Okinawa? Dedication of two aircraft per MEU (SOC) has been suggested but this presents a significant problem because of geographical overlaps into a squadron's areas of responsibilities. It is possible that both VMGR-152 and VMGR-352 both allocate two aircraft for a specific MEU (SOC). When a 50 percent aircraft backup rate is added to the above numbers, we come up with potentially six KC-130s being allotted to a single MEU (SOC). The MEU (SOC) must be task organized and assets allotted. These KC-130 assets should be in direct support of the MEU (SOC) administratively, operationally and logistically.

As previously addressed, aircrew training requires considerable attention. MAWTS-1 must work closely with HQMC, the MEU commander and the VMGR squadrons in order to establish realistic training programs that will facilitate the KC-130 aircrew accomplishment of the MEU (SOC) mission. Moreover, all the commanders must fight to ensure that training flight hours are available.

The lack of trained ground personnel to survey, test, and prepare unimproved airfields needs to be addressed. Where will these people come from? The US Air Force has Combat Control Teams to satisfy its requirements. Unlike the US Air Force, the Marine Corps does not have these teams. Training of special teams must commence immediately. The MEU (SOC) must provide personnel to attend Air Force Combat Control Team School. Those personnel should work closely with KC-130s during pre-deployment training, and deploy with the KC-130.

These problems are by far not all that exist and new ones will be identified in the future. As more experience is gained in the area of special operations, program refinement can be accomplished. Particular attention to the economical utilization of our assets can be made through careful, well-planned programs.

Chapter Six

CONCLUSIONS

In conclusion, it is evident the Marine Hercules with its aircrew is potentially a valuable asset to the MEU (SOC) commander. However, the MEU (SOC) commanders and VMGR commanders must work closely together to establish viable tasks and solve mutual problems. Total understanding of the KC-130 and aircrew capabilities will permit the commander to effectively and efficiently employ this aircraft. Concerted efforts must be made to procure needed equipment and push for realistic training programs. Wing commanders must give dedicated training time to Hercules squadrons. Likewise, squadron commanders must emphasize quality tactical training. Because of financial restrictions and the fact that the MEU (SOC) may become involved in very specialized missions, it cannot be expected that the Hercules as equipped can provide all the support that may be required. If the Marine Corps seriously plans to employ KC-130s in a special operations role, thought should be given to the procurement of a limited number of the Air Force's Combat Talon MC-130s.

The Marine Corps is moving in the right direction with its emphasis on special operations capabilities and the increased awareness of special operations within the VMGR squadrons. What are the areas of responsibility, levels of training and required equipment procurements? These are questions that must be answered. Through hard work, coordinated efforts and sound thinking, lessons regarding special operations will not be learned the hard way!

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